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## NEWS OF THE

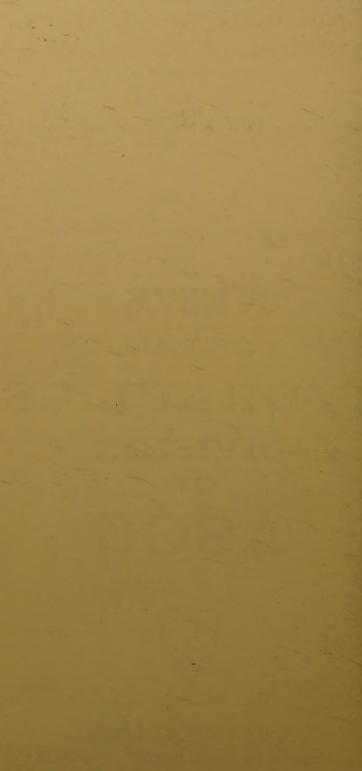
# HYDRAULICS DIVISION

ASCE



JOURNAL OF THE HYDRAULICS DIVISION

PROCEEDINGS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS



#### Journal of the

#### HYDRAULICS DIVISION

Proceedings of the American Society of Civil Engineers

#### NEWS

November, 1961

#### THE PURPOSE OF THE HYDRAULICS DIVISION

"The advancement and dissemination of scientific and engineering knowledge in all branches of hydraulics, hydrology, hydraulic engineering and water resources. In particular this shall embrace meteorology and hydrology as the sciences dealing with the occurrence of water in the atmosphere, on the earth surface and in the ground, fluid mechanics for the understanding of all flow phenomena, applied hydraulics for the design and planning of hydraulic structures and of comprehensive systems, and those social, economic and administrative aspects basic to the conservation and utilization of water as an essential natural resource."

#### COMMITTEES

At the Executive Committee meeting in August new appointments were made to fill vacancies in the Division Committees which were created by the retirement of the senior members. The memberships of the various committees of the Division will be as follows for the 1961-1962 Society Year (year of termination in parentheses):

ASCE Water Resources Coordinating Committee

Hydraulics Division Representative: H. S. Riesbol

Hydraulics Division Executive Committee: E. P. Fortson, Jr. (1963), Chairman, H. S. Riesbol (1964), Vice Chairman, M. L. Dickinson (1962), A. T. Lenz (1965), D. R. F. Harleman, Secretary.

Water Resources Coordinator: H. S. Riesbol.

Newsletter Editor: F. A. Bertle.

J. C. Stevens Award: Victor L. Streeter (1962), Chairman, S. K. Jackson (1963), James M. Robertson (1964).

Note.—No. 1961-41 is Part 2 of the copyrighted Journal of the Hydraulics Division, Proceedings of the American Society of Civil Engineers, Vol. 87, HY 6, November, 1961.

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Publications: James Smallshaw (1963), Chairman, James R. Villem (1965), Vice Chairman, Eugene P. Fortson, Jr. (1962), Donald R. Fman (1962).

Research: Walter B. Langebein (1963), Chairman, Clarence F. Wic (1962), Jacob H. Douma (1964), Harold M. Martin (1965), Joe W. J. (1966).

Session Programs: Herbert S. Riesbol (1962), Chairman, Arno T. I (1963), Arthur R. Luecker (1962), William F. Guyton (1962), Rex A (1962), Frederick R. Brown (1962), G. Earl Harbeck, Jr. (1962), P. Benedict (1962), W. C. Ackermann (1962), Raymond Boucher (1962) E. Hedger (1962).

Standards: Frank B. Campbell, Chairman, Carl E. Kindsvater, Rolla Carter, John L. French, Edward R. Dexter.

Flood Control: Arthur R. Luecker (1963), Chairman, Francis G. Ch. (1962), Walter G. Schulz (1964), Max L. Mitchell (1965), Hu B. Mey (1966).

Ground Water Hydrology: William F. Guyton (1963), Chairman, Dav Todd (1962), Paul Baumann (1964), Harris R. McDonald (1965), M. baugh (1966).

Hydraulic Structures: Rex A. Elder (1963), Chairman, Harold G. Pi (1962), Nicholas J. Barbarosa (1964), Clifford H. McConnell (1965) W. Ball (1966).

Hydromechanics: Frederick R. Brown (1963), Chairman, Norman H (1962), W. Douglas Baines (1964), E. Roy Tinney (1965), Robert G. (1966).

Hydrometeorology: G. Earl Harbeck, Jr. (1963), Chairman, Ray K. (1962), William E. Hiatt (1964), Arvi O. Waananen (1965), W. J. Ro (1966).

Sedimentation: Paul C. Benedict (1963), Chairman, Robert B. Banks Peter S. Eagleson (1964), Alfred S. Harrison (1965), Whitney M. Bo (1966).

Surface Water Hydrology: William C. Ackermann (1963), Chairman Foster (1962), Stifel W. Jens (1964), Victor A. Koelzer (1965), Cha McDonald (1966).

Tidal Hydraulics: Raymond Boucher (1963), Chairman, Charles L. neider (1964), C. P. Lindner (1965), William Shofnos (1966), Reube Johnson (1967).

Water Resources Planning: Harold E. Hedger (1963), Chairman, Ro Smith (1962), Gordon Williams (1964), Edward Kuiper (1965), Euge Webber (1966).

## EXTRACTS FROM MINUTES OF MEETING OF THE EXECUTIVE COMMITTEE HYDRAULICS DIVISION ASCE

#### I. General Session

This meeting of the Executive Committee was held on Thursday, Friday, and Saturday, August 17, 18, and 19, 1961, at Urbana, Illinois. Executive Committee Chairman, Maurice L. Dickinson, presided. Those in attendance were: Mr. Maurice L. Dickinson, Chairman, Mr. Eugene P. Fortson, Jr., Vice Chairman, Mr. Herbert S. Riesbol, Water Resources Coordinator, Mr. Samuel S. Baxter, Dr. Arno T. Lenz, Secretary, Mr. Don P. Reynolds, Assistant Secretary, ASCE.

Messrs. Samuel S. Baxter and Don P. Reynolds attended the Thursday meeting only. In addition, Professors W. M. Lansford and V. H. Scott attended certain portions of the meeting, as indicated later.

Briefing for the Urbana Conference was outlined by the Chairman. This conference was so well run by co-chairmen Messrs. Ackermann, Chow, and Lansford that there was no need for much discussion of this item on the agenda.

Technical Procedures Conference of 1961 at Des Moines, Iowa, on May 5 was reported on by Mr. Dickinson, Mr. Baxter, and Mr. Reynolds. There was extended discussion of the minutes of this conference with special emphasis on Secretary Wiseley's recommendation that the Society conventions consist of a series of carefully planned conferences in specific technical fields, such as water resources, transportation, structures, and environmental engineering. (Editor's note: See September Newsletter and September Civil Engineering for details of Secretary Wiseley's proposal.)

The effect of such a program on Hydraulics Division activities, particularly the annual conference was first considered. Suggestions were made regarding the selection of a general theme for each conference as well as convention, the concentration of authority for a meeting program in one person in order to better coordinate technical committee activity, and the use of more panel discussion and seminar type sessions to secure participation of greater num-

bers in meeting activities.

Specifically there was discussion regarding the Omaha Convention which is to have a Water Resources theme. The Sacramento Conference is to have as its theme "Water Resources Development in California." In keeping with suggestions above, the possibility of certain panel and seminar discussions was considered.

Director Baxter will report the discussions to the Division Activities

Committee and the Board at their next meetings. In general it was agreed
that there was considerable interest in the possibilities presented with a recognition that rather major problems are also presented, such as a possible
reduction in the number of Hydraulics Division half-day sessions per year
from an average of 18 to perhaps half that number. There was reluctance to
give more than tentative concurrence to such plans without further study and
experimentation with the Session Program Committee taking active leadership
in setting up the programs around the adopted central theme. To this end the
executive committee proposed that each of the technical committees shall
meet concurrently with the executive committee at its next meeting in Chicago
on November 10 and 11, starting with a joint half-day session at which planning

of session programs for the next 2 years will be discussed. Followi general joint session, each committee will meet separately to plan a activities for the next year.

Water Resources Coordinating Committee meeting at Denver, Co on June 10 and 11 was reported on by Mr. Riesbol. There was exten cussion of the proposed change suggested by the Hydraulics Division purpose of WRCC include the following added function: "To alert the of Direction and officers and membership on policies pertaining to s cance of developments in national water policy." It was reported that WRCC concluded "any water policy matters which come before this will be referred to the ASCE Liaison Committee on National Water I determined by assignments of responsibility made by the ASCE Boar was moved, seconded, and passed that the Executive Committee of t draulics Division recommend to the Board of Direction that the chair the WRCC be a member of the Liaison Committee on National Water

Coordination with other organizations by the Hydraulics Division cussed. It was agreed that it is a function of the Division to maintain with the American Geophysical Union Section of Hydrology and where are items of mutual interest, contact will also be maintained with the can Society of Agricultural Engineers.

Computer Conference has been suggested as a Division activity fo the national conventions, a part of the annual Hydraulics Division Co or as a separate conference. After considerable discussion it was a suggest to the Water Resources Coordinating Committee that they c such a program for part of the 1963 Water Resources Specialty Conv of the Society.

Pipeline Division Cooperation was discussed. It was agreed to co Hydraulics Division committees to determine where cooperation can effective.

#### II. Review of Committee Activities

Appointments of new members to fill vacancies created by retirin members were made for each committee. New committee chairman were also confirmed. (Editor's note: See previous section for a cor list of committee memberships).

Karl Emil Hilgard, Hydraulic Prize Committee. The Hilgard Prize mittee members all terminate their appointment this year. Since thi will not be awarded again until 1963, it was decided to defer appointn a later meeting of the Executive Committee.

Committee on Publications. Chairman W. M. Lansford gave an or port to the Executive Committee to supplement a letter to the Chairn the following statistics for the period September 1, 1959, through Aug 1961, while he was chairman of the Committee:

Manscripts received	114
Manuscripts Accepted for Publication	74
Manuscripts Presented in Hands of Reviewers	11
Manuscripts Declined	29

Professor Lansford's term as Chairman of the Committee ends on Se 1, 1961, and a detailed report will be presented at the end of the term Professor Lansford also reported briefly on his experience on reviewing precedures during his term of office and agreed to inform Mr. Smallshaw (new year's chairman), regarding this experience. Professor Lansford will continue to work with reviewers on those papers which are still in the hands of reviewers.

Committee on Research. In view of the experience of this Committee over 4 years, certain changes in the statement of objectives were proposed. It is believed that the principal purpose of this Committee is to develop interest in hydraulic research but that initiation, organization, and coordination of hydraulic research is out of its scope. It was proposed that the statement of objectives be revised to read as follows:

"To review the status of research in the fields of hydrology, hydromechanics, and applied hydraulics; to determine the areas in which research is required; and to promote interest in and financial support for research in cooperation with the Society's Committee on Research."

This revised objective was approved by the Executive Committee.

The Committee also proposed that a session of the 1962 Hydraulics Conference be devoted to papers on the value of and need for hydraulic research. The Executive Committee noted that such a session would not fit into the theme of the Sacramento Conference. It was agreed, however, that such a session would be very desirable and proposed that it be fit into a convention or conference program as soon as possible.

Session Programs. The Committee prepared Hydraulics Division programs

for the following conventions held during the year 1961:

Phoenix (primary responsibility)
Phoenix (secondary responsibility)
Urbana Conference

New York

Men TOLE

4 sessions - 13 papers

3 sessions - 2 papers

6 sessions - 22 papers

3 sessions - 10 papers

Committee membership for 1961-62 will consist of the vice chairman of the Executive Committee, the new member of the Executive Committee, and the chairmen of the nine technical committees.

Committee on Standards. Because of an increasing workload and increased responsibility, the Committee requested expansion from three to five members. This request was approved and additional members were named. It was agreed that when the Committee meets, an order of the rotation of the chairmanship and retirement from the committee should be established.

Special Committees on 1962 Society Awards. At its meeting in Phoenix, Arizona, April 10-11, 1961, the Board of Direction "voted approval of a proposal by the Committee on Publications to reallocate the responsibility for administration of certain Society prizes as follows:

\*\*\*Wellington Prize and Norman and Croes medals to a committee of three members to be advisory to the Board of Direction, with nominations to be solicited from the technical divisions."

The Hydraulics Division along with all others was invited to submit nominations for any of the above named awards from the papers published in its journal (or from any of the papers published in any other journal) to be entered in the final competitions. Nominations must be in the Society head-quarters not later than December 1, 1961. The following committee was appointed to make nominations for the Hydraulics Division:

Dean Alfred C. Ingersoll, Chairman Mr. Frank B. Campbell Mr. Joseph I. Perrey

Committee on Flood Control. The Task Force on Flood Plain Replans to meet the later part of this calendar year in order to finaliz port for presentation at an early meeting of the Society. The meeting Task Force was approved. A Task Force on "Effect of Urban Develon Flood Discharges" is being considered but possible conflicts with committee and division activities is being investigated before a final is made. The appointment of Mr. Joseph I. Perrey to the Task Force Flood Plain Regulations was approved.

Committee on Ground-Water Hydrology. Membership to the Tas on Salt Water Intrusion was approved as follows: Mr. Norbert J. La Chairman; Clarence B. Sherwood; David B. Willets, and M. R. Rora be a member and serve as coordinator with the Committee on Groun The Secretary was requested to advise Chairman Todd, the member task force, and Mr. Don P. Reynolds of this action immediately so t possible, a meeting of the Task Force can be held before the end of ety year on October 20.

Committee on Hydraulics Structures. At its meeting in Phoenix, on April 14, 1961, the Committee recommended the formation of the new task forces:

- 1. Discharge Measuring Techniques in Major Structures.
- 2. Vibrations in Hydraulic Structures

These would be in addition to the six task forces now sponsored by t mittee. The Executive Committee agreed that these proposed task f in fields which warrant attention. As a general policy, however, it that Hydraulics Division committees can be more effective when the trate on the completion of present task force assignments rather the spread their efforts too thinly over a large number of task forces, mation of these additional task forces was not approved.

Committee on Hydromechanics. Committee comments regarding tion policies were discussed briefly. Those regarding review proce be passed on to the publications committee. Those regarding present policy were reviewed but no action was taken at this meeting.

Committee on Hydrometeorology. The committee has been work questionnaire to determine the use of neutron scatter devices in soi measurement. It is estimated that 500 questionnaires will be sent of mailing list selected by the committee from various sources. The of was authorized to prepare this questionnaire and mail it out. Postacover the cost of this mailing should be requested as for other committee quirements.

Committee on Sedimentation. The Task Force on Erosion of Coh Materials will have as its chairman Mr. Carl R. Miller. He replace fessor Irving S. Dunn who will continue on the task force. A meetin task force prior to the end of the Society year on October 20 was appeared to Task Force on Local Scour will have as its chairman Dr. Emme Laursen. He replaces Mr. Doublas E. Schneible who will continue of committee. The Task Force on the Preparation of a Manual on Sedi is progressing well with its work. Funds for typing costs was appropriate the sedical series of the Preparation of the Preparation in the 1961-62 budget.

mittee on Surface Water Hydrology. A reorganization of the Task on Spillway Design Floods was suggested. At present this committee members. A control group of not more than five members was sug-

as one method of reorganization.

nmittee on Water Resources Planning. The Executive Committee noted atisfaction the excellent progress this committee had made in a new factivity for the Division. The engineering profession and the public be reminded there is as much glamour and challenge in conceiving, nenting, and operating a major water project, transportation system, s there is in launching new engineering and scientific developments so in the recent news.

#### eports on Plans for Coming Meetings

w York Convention, October 16-20, 1961. Mr. Fortson, chairman of session programs, reported that Hydraulics Division Committees are oring three sessions on Wave Mechanics, Hydraulic Structures, and

Hydraulics.

uston Convention, February 19-23, 1962. The theme for this convention e \*Planning for Industrial Development." Mr. Riesbol, chairman for sessions programs reported requests for four half-day sessions from aulics Division committees. Firm commitments have been made for ons by the Committee on Flood Control, Ground-Water Hydrology, Water urces Planning, and Hydraulic Structures. The Committee on Hydroorology will provide a paper for the session sponsored by the Committee ood Control.

cramento-Davis Conference is scheduled for August 15-17, 1962, will be on the Davis campus of the University of California and is sponsored ly by the Sacramento section of the Society and the University of Calia. Mr. Francis G. Christian has been appointed by the Board of Direcof the Sacramento Section as general chairman of the committee in charge e conference. Mr. Christian is presently chairman of the Committee on d Control of the Division and has long been active in the Division. Proor Verne H. Scott, acting chairman of the Department of Irrigation on the s Campus is chairman of the local arrangements for the University. A e new air-conditioned assembly hall has been reserved as well as facilifor the banquet, cafeteria, and new dormitories to accomodate men, nen, and children. In addition to a motel at Davis, there are many within muting distance at Sacramento. Professor Scott met with the Executive mittee and discussed facilities and proposed plans for trips to Hydraulic jects in and near the Sacramento area.

Detroit Convention, October 8-12, 1962. The theme of the Detroit Convenwill be centered on transportation. It is rather unlikely that the Hydrau-

Division will take any major role in this convention.

Omaha Convention, May 14-18, 1962. "Full Utilization of the Nation's ter Resources" has been selected as the theme for the Omaha Convention. Riesbol, Water Resources Coordinator for the Division and its representve on the Water Resources Coordinating Committee reported plans for sesns by the Committees on Sedimentation, Surface Water Hydrology, Hydrochanics, and a joint session by the Committees on Flood Control and Hyometeorology. In some cases more than one half-day session will be deed to a committee activity and it is anticipated that some sessions will be d jointly with committees of other divisions.

Penn State Conference, August, 1963. The Pennsylvania State Ur at University Park and the Central Pennsylvania Section of ASCE is invitation for the Division to hold its annual conference at the Unive a letter to the Executive Committee, Dean Merritt A. Williamson ad that as a long-time leader in extension services, the University rec value of such conferences, both to those who attend and to the University invitation has been accepted with pleasure. Professor B. A. W advised that Professor Samuel Shulits will be the general chairman conference and Mr. Robert E. McCord, director of continuing educating engineering will be responsible for detailed physical arrangements. dates for the conference will be determined at a later date.

Conventions in 1963 will be hald at Atlanta, February 25-March 1 kee, May 20-24; and San Francisco, October 7-11. No pland for the ings have been made. Programs will depend on convention themes whave not as yet been reported to the Division.

The Executive Committee will hold its next meeting in Chicago, I Friday and Saturday, November 10 and 11, 1961.

#### GENERAL NEWS

#### Pipeline Division

The Committee on Pipeline Planning of the Pipeline Division is eding greater representation from hydraulics, water works, and sanitate neers to round out their membership which is at present mainly machine in the gas and oil industry. The Committee on Pipeling was organized for the purpose "to investigate and correlate stupipeline design and economics, to cooperate with existing organization accomplishment of this purpose, and to disseminate this information profession." Major activities of the Committee include such things igation of the problems involved in the regulation of pipeline design struction, welding of pressure vessels, investigation of economic as mitigating pipeline corrosion, and compilation of a bibliography on plesign.

A review of basic pipeline design concepts for the water, oil, gas ducts industries points out wide design differences and inconsistence things as working pressures, stress levels, and fitting design betwee various engineering groups working on the design of pipelines. The group of the Committee feels that a joint effort is needed between piengineers in the water, oil and gas fields to correlate some of the nences in pipeline design concepts. The Committee would welcome a participation in its activities by hydraulics, waterworks, and sanitaneers, and would also welcome suggestions relative to other areas and interest that could provide useful information to the pipeline inclinterested hydraulic, waterworks, and sanitary engineers are urged tact Mr. Francis Stastny, Chairman of the Committee on Pipeline P 3923 Milton Street, Shreveport, Louisiana.

#### Geological Society of America

George A. Kiersch, F. ASCE, Professor of Engineering Geology University, Ithaca, New York, points out that there is a sizeable gro common members between the Hyraulics Division of ASCE and the heering Geology of the Geological Society of America. In fact, Mr. 1, 3 Hydraulics Division member, is the Chairman of the Division on ering Geology. As evidence of the common interests and close tie, 3. A. has appointed E. C. Marliave, consulting geologist, Sacramento. nis, and John H. Harshbarger, Professor of Geology, University of 1. Tuscon, as representatives of the Division of Engineering Geology bish liaison with the Hydraulics Division's Committee on Water Res Planning.

#### do Section of ASCE

Hydraulics Division of the Colorado Section, under the leadership of nan Claude R. Hunter, reports the completion of a highly successful Eight meetings were held jointly with the Irrigation and Drainage on of the Colorado Section, with an average attendance of 29. Speeches minent engineers in the Denver area were heard on the following sub-Irrigation and Drainage in West Pakistan, Hydraulics as Related to by Drainage, Practices of Design and Construction of Thin Arch Dams ope, Subsurface Structural Damage Caused by the Madison River quake of August, 1959, Saline Water Conversion, Colorado Water Rights, lation of Laboratory Test Data for Use in Stable Channel Design, and ration Suppression Studies on Sahuaro Lake, Arizona.

e new season was inaugerated September 27, 1961, with a talk by Mr. Hufferd of the Bureau of Reclamation on the subject "Diversion Works." rs for the 1961-62 year will be: Chairman, William Simons, Bureau of mation; Vice Chairman, Kenneth R. Wright, Wright Water Engineers; ecretary-Treasurer, J. Stuart Meyers, Geological Survey.

#### TO ASCE MEMBERS OF CHI EPSILON

ni Epsilon Fraternity, national civil engineering honor society, has oflly offered to supply the funds necessary to furnish a formal Conference at the United Engineering Center. This room will be on the ASCE exve floor, will be named "The Chi Epsilon Room," and will be available conference and committee meetings.

ledges are not expected, but single voluntary gifts, from members and ds of the Fraternity are earnestly solicited. An attractive Commemora-Book has been planned in which donors of \$100 or more (singly or in

ps) may inscribe the name of a revered person.

n request, the national chairman, Samuel Kramer (8701 Shore Road, oklyn 9, New York) will be glad to mail a descriptive brochure. Your gift ax deductible if you make your check out to "ASCE CHI EPSILON ROOM D" and mail it to Mr. Donald D. King, ASCE, United Engineering Center, East 47th Street, New York 17, N. Y. Your gift will be automatically ited to the quota of your initiating Chapter. The national goal is \$10,000.

#### NEW PUBLICATIONS

The following is a bibliographical listing of separate publicatio posed to papers in technical journals) which are recommended by bers of the Division as being of value to the interests of the Hydra sion and which do not appear in other lists which are widely distrit hydraulics men (for example citation will not be made to articles announced in "Civil Engineering," in the indexes published by the ernment Printing Office, or in other similar lists). Inclusion or no facitation in the list does not imply any degree of endorsement I draulics Division or your editor. Citations for inclusion in this cu were made by Dr. D. K. Todd (12), N. H. Brooks (4), and W. M. I All members are encouraged to submit appropriate and complete a dations for the list. If appropriate, also include the sale price of tion. Your comments regarding this listing will be appreciated.

- 1. Anon., A Study of Methods Used in Measurement and Analysis Loads in Streams, Report P, Investigations of Differential-Pr Gages for Measuring Suspended-Sediment Concentrations, Fed Agency Sedimentation Project, St. Anthony Falls Hydraulic La Hennepin Island and Third Avenue, SE, Minneapolis 14, Minneapol., June 1961.
- Anon., Comparison of supplemental sources of water supply, A County Water District, Fremont, California, 71 pp., 1961.
- Anon., Information Bulletin—Delaware river basin study—Brid of water needs and recommended plan of development, U. S. C Engineers (Army), Philadelphia, 39 pp., 1961.
- 4. Anon., Selected runoff events for small agricultural watershed United States, Soil and Water Conservation Research Division, Agricultural Research Service, Washington, D. C., 1960.
- 5. Assembly. Interim Committee on water, Economic and financ for State water projects, California Legislature, Sacramento,
- Brandes, E. M., The impact of saline water conversion on the State water facilities, Stanford Research Inst., Menlo Park, C. 41 pp., 1960.
- 7. Brewer, M. F., Economics of public water pricing, Research r 244, Giannini Foundation of Agric. Economics, University of C Berkeley, 33 pp., 1961.
- 8. Caldwell, J. M., Development and tests of a radioactive sedime probe, Technical memorandum No. 121, U. S. Beach Erosion B. Washington, D. C., 29 pp., 1960.
- 9. Cleasby, J. L. and E. R. Baumann, Selection of optimum filtrat for sand filters, Engr. Experiment Station, Iowa State Universi 56 pp., 1960.
- Committee on Runoff, Bibliography of theses concerning runoff by graduate students at various universities and colleges, Ame Agric. Engrs., St. Joseph, Michigan, 68 pp., 1961.

SCE Meetings

Kennedy, J. F., Stationary Waves and Antidunes in Alluvial Channels, Report No. KH-R-2, W. M. Keck Laboratory of Hydraulics and Water Resources, California Institute of Technology, Pasadena, California, 146 pp., January 1961.

Kennedy, J. F., Further Laboratory Studies of the Roughness and Suspended Load of Alluvial Streams, Report No. Kh-R-3, W. M. Keck Laboratory of Hydraulics and Water Resources, California Institute of Technology, Pasadena, California, 36 pp., April 1961.

Lee, R. R., The Santa Clara County water controversy: A case study in water resources administration, Project on engineering-economic planning, Case Study No. 1, Stanford University, Palo Alto, California, 50 pp., 1961.

Radionov, S. I., Wave dissipation by compressed air (pneumatic breakwater), Inst. of Engr. Research, Technical Report No. 104-9, University of California, Berkeley, 41 pp., 1960, (English translation by H. Arnesen).

Sellers, W. D., Distribution of relative humidity and dew point in the Southwestern United States, Scientific report No. 13, Inst. of Atmospheric Physics, University of Arizona, Tucson, 49 pp., 1960.

Smith, G. L., Scour and Scour Control Below Cantilevered Culvert Outlets, Report No. CER61GLS14, Colorado State University Research Foundation, Fort Collins, Colorado, 109 pp., 1961.

Taylor, R. H., Jr., Exploratory Studies of Open-Channel Flow over Boundaries of Laterally Varying Roughness, Report No. KH-R-4, W. M. Keck Laboratory of Hydraulics and Water Resources, California Institute of Technology, Pasadena, California, July 1961.

Vanoni, V. A., N. H. Brooks, and J. F. Kennedy, Lecture Notes on Sediment Transportation and Channel Stability, Report No. KH-R-1, W. M. Keck Laboratory of Hydraulics and Water Resources, California Institute of Technology, Pasadena, California, 140 pp., January 1961.

#### FOR YOUR CALENDAR

#### ASCE, Houston Convention. Theme: "Planning 'ebruary 19-23, 1962 for Industrial Development" ASCE, Omaha Convention. Theme: "Full Utili-May 14-18, 1962 zation of the Nation's Water Resources" Hydraulics Division Conference, Davis, Cali-August 15-17, 1962 fornia. Theme: "Water Resources Development in California" ASCE, Detroit Convention. Theme: "Trans-October 8-12, 1962 portation" February 25-March 1, 1963 ASCE, Atlanta Convention ASCE, Milwaukee Convention May 20-24, 1963

1961-4112	HY 6	Novem
August, 1963	Hydraulics Division Confe Pennsylvania	rence, Univ
October 7-11, 1963	ASCE, San Francisco Con	vention
Non-ASCE Meetings		
November 30-December 1, 1961	Conference on Western Ti lems, Washington State Un Washington	
December 26-31, 1961	Meeting of American Assovancement of Science, inc. Groundwater, Land and Wand Climate; Denver, Col-	luding Sympo ater Use, an
June 18-21, 1962	Fourth National Congress University of California, 1	
September 10-18, 1962	Symposium on the Variation Existing Glaciers, Internation Scientific Hydrology, Ober Austria	tional Assoc
October 1962	Symposium on Land Erosi Association of Scientific H	

#### USE OF THE HYDRAULICS DIVISION NEWSLETTER

You are urged to use the Division Newsletter for announcements, personnel news, committee reports, surveys and other items of inte Division members. A short note summarizing the highlights of commeetings is particularly requested. Suggestions for improvement of letter will be appreciated. All contributions are appreciated.

Deadline dates for Newsletter contributions: January 1962 issue-

ber 24, 1961; March 1962 issue-January 26, 1962.

Fred A. Bertle 4475 Carr Street Wheat Ridge, Cold

#### NEW ASCE TRANSACTIONS SOON TO GO TO PRESS

In mid-May all Society members received a brochure describin vamping that the TRANSACTIONS are undergoing. Since that time t of orders have been received, but still more should have reached us

Beginning with Volume 126 (1961), TRANSACTIONS will be isstandard set of five parts, containing all Division Journal papers, a to the following schedule:

Part I Engineering Mechanics, Hydraulics, Soil Mechanics and tions

Part II Construction, Structural

Part III Irrigation and Drainage, Power, Sanitary Engineering

Additional member

orders

Part IV Air Transport, City Planning, Highway, Pipeline, Surveying and Mapping, Waterways and Harbors

Part V Professional Practice

Members of ASCE can enter standing orders to any one, or more, of Parts brough IV at \$3.50 each per year; the price for Part V will be \$2.00 per Members can effect a considerable saving by subscribing to all five

ts-the total price of \$16.00 is reduced to \$10.00.

Part V is reserved for the papers published in the Journal of Professional actice, which is of interest to all members, regardless of their technical belatites. Part V will also contain the President's Annual Address, abacts of the memoirs of deceased members, Final Reports of Committees in Department of Conditions of Practice, and combined subject and author intes for Parts I through V.

The TRANSACTIONS will be mailed in December of each year and the bills

Il be sent out at that time.

Please use the following coupon to place your order. Do not send in a upon if you previously mailed the original order card.

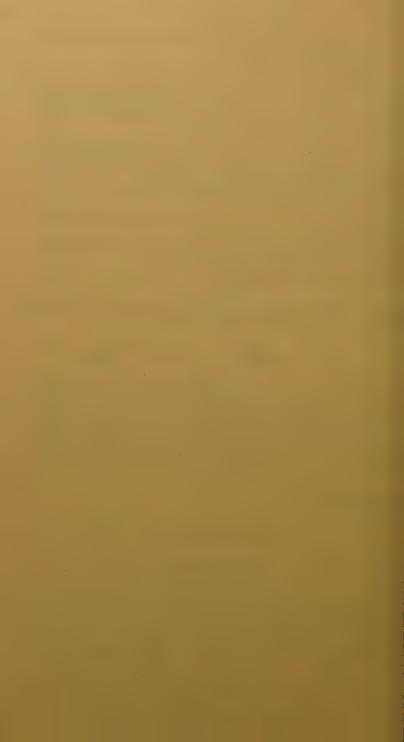
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Please enter my standing order for the New ASCE TRANSACTIONS (beputing with Vol. 126, 1961) as follows (Do not prepay):

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